

IN THE CLAIMS

Please amend the claims to be in the form as follows:

Claims 1-12. (cancelled)

13. (previously presented) An encoding device comprising:

a compression unit for encoding a signal representing a video program of a predefined duration into compressed digital data with a variable bit rate; and

system controller means for controlling the compression unit for adjusting during the encoding, the bit rate of the digital data for fitting the program in a predetermined data space which is available for the program depending on: a remaining part of the data space determined during the encoding, a remaining part of the duration of the program determined during the encoding, and a complexity of at least a part of the program.

14. (previously presented) A recording device comprising:

recording means for recording digital data on the information carrier having a predetermined data space available for recording;

a compression unit for encoding a signal representing a video program of a predefined duration into digital data;

data space means for determining during the encoding, the remaining part of the data space;

duration means for determining during the encoding, the remaining part of the duration of the video program;

data space means for determining during the encoding, the complexity of at least a part of the video program; and

system controller means for controlling the compression unit for adjusting during the encoding the bit rate of the digital data for fitting the program in the data space depending on: the

remaining part of the data space determined during the encoding; the remaining part of the duration of the video program determined during encoding; and the complexity of at least a part of the video program.

15. (previously presented) A method of encoding comprising the steps of:

- receiving a signal that represents a video program of a predefined duration;

- encoding to convert the signal into compressed digital data with a bit rate adjusted for fitting the program into a predetermined data space which is available for the program;

- determining during the encoding, a remaining part of the memory space;

- determining during the encoding, a remaining part of the duration of the video program;

- determining during the encoding, the complexity of at least a part of the video program; and

- adjusting settings of the compression process for adjusting during the encoding the bit rate depending on: the remaining part of the data space determined during encoding, the remaining part of the duration determined during encoding, and the complexity of at least a part of the program determined during encoding.

16. (previously presented) Apparatus for programming a programmable controller to provide programmed structures to control a compression unit to influence a bit rate of a program of predefined duration, comprising:

- means for providing programmed structures for determining during the encoding, a remaining part of the memory space;

means for providing programmed structures for determining during the encoding, a remaining part of the duration of the video program;

means for providing programmed structures for determining during the encoding, the complexity of at least a part of the video program; and

means for providing programmed structures for adjusting settings of the compression process for adjusting during the encoding the bit rate depending on: the remaining part of the data space determined during encoding, the remaining part of the duration determined during encoding, and the complexity of at least a part of the program determined during encoding.

17. (previously presented) An encoded signal produced by the method of 15.

18. (previously presented) Computer media containing the encoded signal of 17.

19. (currently amended) The encoding device of 13 wherein the system controller means ~~further comprises controlling~~ controls the compression unit to set compression in accordance with the complexity for the at least a part of the program by increasing compression for more complex parts of the program.

20. (previously presented) The encoding device of 19 wherein the system controller means computes a new value for the bit rate in response to more complex of the parts of the program being encoded with increased compression.

21. (previously presented) The encoding device of 13 wherein the compression unit employs a variable bit rate in accordance with program signal contents.

22. (previously presented) The recording device of 14 wherein the system controller means controls the compression unit to set compression in accordance with the complexity for the at least a part of the program by increasing compression for more complex parts of the program.

23. (currently amended) The recording device of 22 wherein the system controller means ~~for~~ computes a new value for the bit rate in response to more complex of the parts of the program being encoded with increased compression.

24. (previously presented) The recording device of 14 wherein the compression unit employs a variable bit rate in accordance with program signal contents.

25. (currently amended) The method of 15 wherein the adjusting of the settings of the compression process further comprises adjusting the settings in accordance with the complexity for the at least a part of the program by increasing compression for more complex parts of the program.

26. (currently amended) The method of 25 wherein the adjusting of the settings of the compression process further comprises computing a new value for the bit rate in response to more complex of the parts of the program being encoded with increased compression.

27. (currently amended) The method of 15 wherein the adjusting of the settings of the compression process further comprises varies bit rates in accordance with program signal contents.

28. (currently amended) The apparatus for programming a programmable controller of 16 wherein the means for providing programmed structures for adjusting the settings of the compression process further comprises means for adjusting the settings in accordance with the complexity for the at least a part of the program by increasing compression for more complex parts of the program.

29. (currently amended) The apparatus for programming a programmable controller of 28 wherein the adjusting of the settings of the compression process further comprises computing a new value for the bit rate in response to more complex of the parts of the program being encoded with increased compression.

30. (currently amended) The apparatus for programming a programmable controller of 16 wherein the adjusting of the settings of the compression process further comprises ~~varies~~ varying the bit rates in accordance with program signal contents.

31. (new) A signal, comprising a variable bit rate data stream of a predetermined size, representing a video program of predetermined duration, and being encoded with a variable compression ratio, the compression ratio at different positions of the stream depending on at least: the size of a subsequent portion of the data stream; and the duration of a subsequent portion of the video program represented by the subsequent portion of the data stream; and a complexity of at least a part of the video program.

32. (new) A computer readable media containing the signal of claim 31.

33. (new) An encoding device comprising:

a compression unit for encoding a signal representing a video program of a predefined duration into compressed digital data with a variable bit rate; and

system controller means for controlling the compression unit for adjusting, during the encoding, the bit rate of the digital data, for limiting the amount of encoded data to less than a predetermined amount of encoded data to represent the program, the adjusting depending on: a remaining part of the predetermined amount determined during the encoding, a remaining part of the duration of the program determined during the encoding, and a complexity of at least a part of the program.

34. (new) A method of encoding comprising the steps of:

receiving a signal that represents a video program of a predefined duration;

encoding to convert the signal into compressed digital data with a bit rate adjusted for limiting the size of the encoded data representing the program to less than a predetermined amount of encoded data;

determining during the encoding, a remaining part of the predetermined amount of encoded data;

determining during the encoding, a remaining part of the duration of the video program;

determining during the encoding, the complexity of at least a part of the video program; and

adjusting settings of the compression process for adjusting during the encoding the bit rate depending on: the remaining part of the predetermined amount of data, determined during encoding,

the remaining part of the duration determined during encoding, and the complexity of at least a part of the program determined during encoding.

35. (new) An encoding device for encoding a signal, the signal representing a program of a predefined duration, and the encoding device comprising a compression unit for compressing the signal to digital data, and a system controller for controlling the compression unit for influencing the bit rate of the digital data for fitting the program in a data space which is available for the program in dependence on a remaining part of the data space and a remaining part of the duration established during encoding, characterized in that the system controller is arranged for setting the compression unit in dependence on a program complexity of the actual program.

36. (new) The encoding device as claimed in Claim 35, characterized in that the system controller is arranged for establishing the program complexity in dependence on an actual bit rate during a previously encoded part of the program.

37. (new) The encoding device as claimed in Claim 36, characterized in that the system controller is arranged for establishing the program complexity in dependence on peaks and valleys or variation of the actual bit rate during a previously encoded part of the program.

38. (new) The encoding device as claimed in Claim 35, characterized in that the system controller is arranged for establishing the program complexity in dependence on a program type.

39. (new) The encoding device as claimed in Claim 35, characterized in that the system controller is arranged for determining the duration in dependence on an expected duration of the program and a margin for leveling off peaks in the bit rate in a last part of the program and/or for the program overrunning its time.

40. (new) A recording device for recording a signal on an information carrier, the signal representing a program of a predefined duration, the information carrier having a vacant data space available for recording the program, and the device comprising recording means for recording a digital bit stream on the information carrier and means for establishing the predefined duration, characterized in that the recording device comprises an encoding device as claimed in Claim 35.

41. (new) A method of encoding a signal that represents a program of a predefined duration, the signal being converted by a compression process into digital data with a bit rate influenced for fitting the program in a vacant data space which is available for the program, in which method a remaining part of the vacant memory space and a remaining part of the duration are determined during the encoding process and the bit rate is influenced by settings of the compression process in dependence on the remaining part of the vacant data space and the remaining part of the duration, characterized in that the compression process is set in dependence on a program complexity of the actual program.

42. (new) The method as claimed in Claim 41, characterized in that the program complexity is established in dependence on an actual bit rate during a previously encoded part of the program.

43. (new) The method as claimed in Claim 41, characterized in that the program complexity is established in dependence on peaks and valleys or variation of the actual bit rate during a previously encoded part of the program.

44. (new) The method as claimed in Claim 41, characterized in that the program complexity is established in dependence on a program type.

45. (new) The method as claimed in Claim 41, characterized in that the duration is determined in dependence on an expected duration of the program and a margin for leveling off peaks in the bit rate in a last part of the program and/or for the program overrunning its time.

46. (new) An encoded signal obtained by implementing the method as claimed in Claim 41.

47. (new) The encoding device as claimed in Claim 35, wherein:

the system controller is arranged for establishing the program complexity in dependence on peaks and valleys or variation of the actual bit rate during a previously encoded part of the program;

the system controller is arranged for establishing the program complexity in dependence on a program type; and

the system controller is arranged for determining the duration in dependence on an expected duration of the program and a margin for leveling off peaks in the bit rate in a last part of the program and/or for the program overrunning its time.

48. (new) The recording device as claimed in Claim 40, wherein:

the system controller is arranged for establishing the program complexity in dependence on peaks and valleys or variation of the actual bit rate during a previously encoded part of the program;

the system controller is arranged for establishing the program complexity in dependence on a program type; and

the system controller is arranged for determining the duration in dependence on an expected duration of the program and a margin for leveling off peaks in the bit rate in a last part of the program and/or for the program overrunning its time.

49. (new) The method as claimed in Claim 41, wherein

the program complexity is established in dependence on peaks and valleys or variation of the actual bit rate during a previously encoded part of the program;

the program complexity is established in dependence on a program type;

the duration is determined in dependence on an expected duration of the program and a margin for leveling off peaks in the bit rate in a last part of the program and/or for the program overrunning its time.

49. (new) The encoded signal as claimed in Claim 46, wherein

the program complexity is established in dependence on peaks and valleys or variation of the actual bit rate during a previously encoded part of the program;

the program complexity is established in dependence on a program type;

the duration is determined in dependence on an expected duration of the program and a margin for leveling off peaks in the bit rate in a last part of the program and/or for the program overrunning its time.